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  File   5:Biosis Previews(R) 1969-2004/Jul W1
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            7262  STEARIC
          128053  OIL
          185797  SEED
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           15644  SN
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 2/3/1     (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
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0011653110   BIOSIS NO.: 199800447357
Influence of lipase-catalyzed interesterification on the oxidative
  stability of melon seed oil triacylglycerols
AUTHOR: Moussata Charment O; Akoh Casimir C (Reprint)
AUTHOR ADDRESS: Dep. Food Science and Technol., Food Science Building, Room
  211, Univ. Ga., Athens, GA 30602-7610, USA**USA
JOURNAL: Journal of the American Oil Chemists' Society  75 (9): p1155-1159
Sept., 1998 1998
MEDIUM: print
ISSN: 0003-021X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English


 2/3/2     (Item 2 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
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0011098925   BIOSIS NO.: 199799732985
Characterization of polar and nonpolar seed lipid classes from highly
  saturated fatty acid sunflower mutants
AUTHOR: Alvarez-Ortega Rosario; Cantisan Sara; Martinez-Force Enrique;
  Garces Rafael (Reprint)
AUTHOR ADDRESS: Inst. de la Grasa, CSIC, Apartado 1078, 41080 Sevilla,
  Spain**Spain
JOURNAL: Lipids  32 (8): p833-837 1997 1997
ISSN: 0024-4201
DOCUMENT TYPE: Article
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RECORD TYPE: Abstract
LANGUAGE: English

2/3/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


0008256063 BIOSIS NO.: 199293098954
POSITIONAL ANALYSIS AND DETERMINATION OF TRIACYLGLYCEROL STRUCTURE OF ARGANIA-SPINOSA **SEED OIL**
AUTHOR: MAURIN R (Reprint); FELLAT-ZARROUCK K; KSIR M
AUTHOR ADDRESS: LAB CHIMIE ORGANIQUE SYNTHESE, UNIV PROVENCE, CASE 541, AV NORMANDIE-NIEMAN, 13397 MARSEILLE CEDEX 13, FR**FRANCE
JOURNAL: Journal of the American Oil Chemists' Society 69 (2): p141-145 1992
ISSN: 0003-021X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH
? t 2/5/1-3

2/5/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


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Influence of lipase-catalyzed interesterification on the oxidative stability of melon **seed oil** triacylglycerols
AUTHOR: Moussata Charment O; Akoh Casimir C (Reprint)
AUTHOR ADDRESS: Dep. Food Science and Technol., Food Science Building, Room 211, Univ. Ga., Athens, GA 30602-7610, USA**USA
JOURNAL: Journal of the American Oil Chemists' Society 75 (9): p1155-1159 Sept., 1998 1998
MEDIUM: print
ISSN: 0003-021X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Melon seeds are rich in ***oil*** . However, the stability of melon **seed oil** (MSO) is low because of its **high** content of the essential fatty acid, linoleic acid (18:2n-6). MSO was physically blended or enzymatically interesterified with **high-oleic** sunflower ***oil*** (HOSO). The fatty acid composition of MSO was remarkably changed after interesterification. Palmitic (16:0), **stearic** (18:0), and **oleic** (18:1 n-9) acid contents increased at the **sn**-2 position of triacylglycerols, whereas 18:2 n-6 decreased due to interesterification. The oxidative stability of the physical and Pseudomonas sp. (PS30) lipase-interesterified blends was assessed with the Oxidative Stability Instrument, peroxide value, and conjugated diene methods. The stability of MSO increased with increased proportions of HOSO, which was the source of 18:1 n-9 in the blends. The ratio of 1 8:1 n-9/18:2n-6 improved from 0.18 in MSO to 1.47 in the enzymatically interesterified blend. Calculated oxidizability and the results of oxidation tests of the blends confirmed the improvement in MSO stability by both physical blending and enzymatic interesterification.

REGISTRY NUMBERS: 60-33-3: linoleic acid; 112-80-1: **oleic** acid; 57-10-3: palmitic acid; 57-11-4: **stearic** acid
DESCRIPTORS:
MAJOR CONCEPTS: Foods

CHEMICALS & BIOCHEMICALS: linoleic acid--**seed oil** constituent; **oleic** acid--**seed oil** constituent; palmitic acid--**seed oil** constituent; **stearic** acid--**seed oil** constituent; triacylglycerols--**seed oil** constituent
METHODS & EQUIPMENT: lipase-catalzyed interesterification--biochemical method
MISCELLANEOUS TERMS: **high-oleic** sunflower **oil**--fats and oils; melon **seed oil**--fats and oils, oxidative stability
CONCEPT CODES:
13502 Food technology - General and methods
10060 Biochemistry studies - General
10802 Enzymes - General and comparative studies: coenzymes

2/5/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


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Characterization of polar and nonpolar **seed** lipid classes from highly saturated fatty acid sunflower mutants
AUTHOR: Alvarez-Ortega Rosario; Cantisan Sara; Martinez-Force Enrique; Garces Rafael (Reprint)
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JOURNAL: Lipids 32 (8): p833-837 1997 1997
ISSN: 0024-4201
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The **seed** lipids from five sunflower mutants, two with **high** palmitic acid contents, one of them in **high oleic** background, and three with **high stearic** acid contents, have been characterized. All lipid classes of these mutant seeds have increased saturated fatty acid content although triacylglycerols had the highest levels. The increase in saturated fatty acids was mainly at the expense of **oleic** acid while linoleic acid levels remained unchanged. No difference between mutants and standard sunflower lines used as controls was found in minor fatty acids: linolenic, arachidic, and behenic. In the ***high*** -palmitic mutants palmitoleic acid (16:1 n-7) and some palmitolinoleic acid (16:2n-7, 16:2n-4) also appeared. Phosphatidylinositoi, the lipid with the highest palmitic acid content in controls, also had the highest content of palmitic or **stearic** acids, depending on the mutant type, suggesting that saturated fatty acids are needed for its physiological function. Positional analysis showed that mutant oils have very low content of saturated fatty acids in the **sn**-2 position of triacylglycerols, between the content of olive ***oil*** and cocoa butter.

REGISTRY NUMBERS: 57-10-3: PALMITIC ACIDS; 57-11-4: **STEARIC** ACID; 112-80-1: **OLEIC** ACID; 60-33-3: LINOLEIC ACID; 112-85-6: BEHENIC ACID; 506-30-9: ARACHIDIC ACID; 373-49-9: PALMITOLEIC ACID; 463-40-1: LINOLENIC ACID
DESCRIPTORS:
MAJOR CONCEPTS: Biochemistry and Molecular Biophysics
BIOSYSTEMATIC NAMES: Compositae--Dicotyledones, Angiospermae, Spermatophyta, Plantae
ORGANISMS: sunflower (Compositae); Helianthus annuus (Compositae)
COMMON TAXONOMIC TERMS: Angiosperms; Dicots; Plants; Spermatophytes;

Vascular Plants
CHEMICALS & BIOCHEMICALS: PALMITIC ACIDS; **STEARIC** ACID; **OLEIC** ACID; LINOLEIC ACID; BEHENIC ACID; ARACHIDIC ACID; PALMITOLEIC ACID; PALMITOLINOLEIC ACID; LINOLENIC ACID
MISCELLANEOUS TERMS: ARACHIDIC ACID; BEHENIC ACID; BIOCHEMISTRY AND BIOPHYSICS; HIGHLY SATURATED FATTY ACID MUTANT; LINOLEIC ACID; LINOLENIC ACID; **OLEIC** ACID; PALMITIC ACIDS; PALMITOLEIC ACID; PALMITOLINOLEIC ACID; PHOSPHATIDYLINOSITOL; **STEARIC** ACID; TRIACYLGLYCEROL
CONCEPT CODES:
10066 Biochemistry studies - Lipids
51522 Plant physiology - Chemical constituents
BIOSYSTEMATIC CODES:
25840 Compositae

2/5/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)


0008256063 BIOSIS NO.: 199293098954
POSITIONAL ANALYSIS AND DETERMINATION OF TRIACYLGLYCEROL STRUCTURE OF ARGANIA-SPINOSA **SEED OIL**
AUTHOR: MAURIN R (Reprint); FELLAT-ZARROUCK K; KSIR M
AUTHOR ADDRESS: LAB CHIMIE ORGANIQUE SYNTHESE, UNIV PROVENCE, CASE 541, AV NORMANDIE-NIEMAN, 13397 MARSEILLE CEDEX 13, FR**FRANCE
JOURNAL: Journal of the American Oil Chemists' Society 69 (2): p141-145 1992
ISSN: 0003-021X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: The distribution of fatty acids between the **sn**-1, and **sn**-2 and **sn**-3 positions of triacylglycerols from Argania spinosa ***seed*** ***oil*** of Morocco has been determined. Saturated fatty acids showed preference for external positions. The ***sn*** -1 position contained slightly more palmitic acid than the **sn**-3 position, whereas **stearic** acid was preferentially esterified at the ***sn*** -3 position. Linoleic acid occurred predominantly in the ***sn*** -2 position with lesser amount evenly distributed between the **sn** -1and the ***sn*** -3 positions, as generally found in vegetable oils. **Oleic** acid was distributed with a slight preference shown for the internal position, whereas the distribution between the external positions revealed a slight preference for the ***sn*** -1 position. The distribution of the triacylglycerols determined from **high** -performance liquid chromatography (HPLC) is at variance with that calculated from the 1-random 2-random 3-random distribution theory. This is particularly true for trioleoyl and trilinoleoylglycerols. In contrast, the agreement between theory and experiment is good for triacylglycerols containing two oleoyl and one linoleoyl chains, one oleoyl, one linoleoyl and one palmitoyl chains or one oleoyl, one palmitoyl, and one stearoyl chains.

DESCRIPTORS: FATTY ACIDS FATS AND OILS
DESCRIPTORS:
MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Foods
BIOSYSTEMATIC NAMES: Sapotaceae--Dicotyledones, Angiospermae, Spermatophyta, Plantae
COMMON TAXONOMIC TERMS: Angiosperms; Dicots; Plants; Spermatophytes; Vascular Plants
CONCEPT CODES:

10066 Biochemistry studies - Lipids
13514 Food technology - Fats and oils
13530 Food technology - Evaluations of physical and chemical properties
51522 Plant physiology - Chemical constituents
BIOSYSTEMATIC CODES:
26715 Sapotaceae
?